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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,287	06/29/2004	Shinichi Sasaki	042424	5209

38834 7590 02/09/2007  
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP  
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WASHINGTON, DC 20036

EXAMINER
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CHEN, WEN YING PATTY

ART UNIT	PAPER NUMBER
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2871

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/09/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 10/500,287	Applicant(s) SASAKI ET AL.	
	Examiner W. Patty Chen	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2006.
- 2a) ☒ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                                  |                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                                 | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                             | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/28/06</u> . | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

Claims 1-2 and 4-9 remain pending in the current application.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

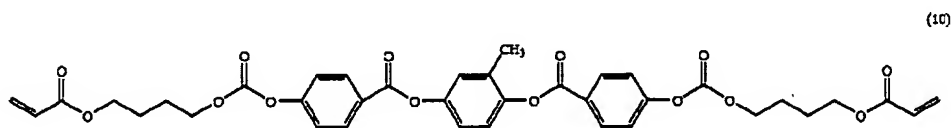
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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

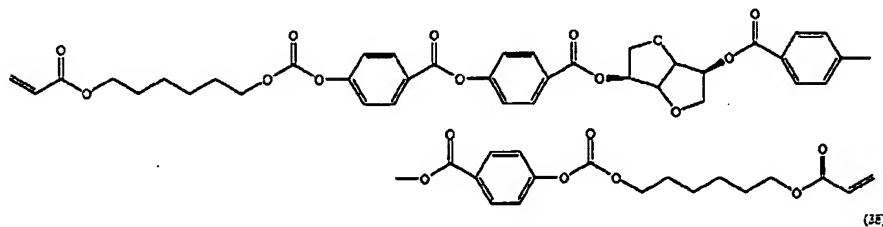
Claims 1 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arakawa et al. (US 6400433) in view of Hashimoto (US 6657690) further in view of Meyer et al. (US 6773766; which is a continuation of 09/857216 filed on Jun. 22, 2001).

With respect to claim 1: Arakawa et al. disclose in Figures 6-8 a polarizing plate comprising: a polarizing layer (element P) and an optically compensating layer, wherein the optically compensating layer comprises an optically compensating A-layer (element B) comprising a polymer film (Column 7, lines 47-48), and an optically compensating B-layer (element A) comprising a cholesteric liquid crystal layer (Column 7, lines 41-41 and Column 20, lines 32-35) and further disclose in Column 4 lines 64-66 that the optically compensating A-layer meets requirements indicated by the formulae:  $20nm \leq Re \leq 300nm$ , where  $Re = (n_x - n_y) \cdot d$ .

Arakawa et al. fail to specifically disclose that the optically compensating A-layer meets the requirement that  $1.2 \leq R_{th}/Re$ , where  $R_{th} = (n_x - n_z) \cdot d$  and further that the cholesteric liquid crystal layer is formed from a liquid crystal monomer represented by the chemical formula:



and a polymerizable chiral dopant represented by the chemical formula:



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However, Hashimoto discloses in Column 7 lines 46-52 an optically compensating layer made of a polymer film having the characteristics of  $20nm \leq Re \leq 300nm$  and  $1.2 \leq Rth/Re$  (wherein  $Re$  is in the range of  $20nm \sim 200nm$  and  $Rth$  is in the range of  $70nm \sim 500nm$ ) and Meyer et al. disclose in Column 11 line 65 through Column 18, wherein a cholesteric liquid crystal layer comprises of liquid crystal monomer and a polymerizable chiral dopant having the chemical formula shown above.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct a polarizing plate as taught by Arakawa et al. wherein the optically compensating A-layer having the retardation as taught by Hashimoto; since Hashimoto teaches that such compensating layer with the specified retardation values minimizes lateral fluctuation thus helps to optically compensate the display image more evenly (Column 7, lines 27-45) and wherein the cholesteric liquid crystal layer comprises of liquid crystal monomer and a polymerizable chiral dopant having the chemical formula as taught by Meyer et al., since Meyer et al. teach that such cholesteric liquid crystal layer exhibits excellent optical properties such as wide range of light reflection property (Column 12, lines 36-42).

As to claim 5: Arakawa et al. further disclose in Figure 6 that the polarizing plate with optical compensation function further comprising an alignment layer (element O).

As to claim 6: Arakawa et al. further disclose in Column 7 lines 47-53 that the polymer film is a stretched film.

As to claim 7: Arakawa et al. further disclose in Column 25 line 52 through Column 26 line 34 that a pressure-sensitive adhesive layer is arranged on one of the surfaces of the polarizing plate.

As to claims 8 and 9: Arakawa et al. disclose in Figure 8 an image display comprising a liquid crystal cell (element LC) and a polarizing plate (elements P, A and B combined) arranged on at least one surface of the liquid crystal cell.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arakawa et al. (US 6400433), Hashimoto (US 6657690) and Meyer et al. (US 6773766; which is a continuation of 09/857216 filed on Jun. 22, 2001) in view of Nishikawa et al. (US 6685998).

Arakawa et al., Hashimoto and Meyer et al. disclose all of the limitations set forth in the previous claims, but fail to specifically disclose that an angle formed by an absorption axis of the polarizing layer and a slow axis of the optically compensating A-layer (the anisotropic layer made of a polymer film) is not smaller than  $85^{\circ}$  and not larger than  $95^{\circ}$ .

However, Nishikawa et al. disclose in Column 4 lines 1-21, Column 5 lines 57-61 and Column 6 lines 3-14 that since the slow axis of optically compensating layer made of liquid crystalline is perpendicular to the rubbing direction of optically compensating layer made of polymer; the rubbing direction of the polymer layer is parallel to the slow axis of polymer layer; and that the absorption axis of the polarizing layer is parallel to the slow axis of liquid crystalline layer, therefore, the absorption axis of the polarizing layer is perpendicular (forming a  $90^{\circ}$  angle, which is not smaller than  $85^{\circ}$  and not larger than  $95^{\circ}$ ) to the slow axis of the polymer layer.

Therefore, it would have been obvious at the time the invention was made to construct a polarizing plate as taught by Arakawa et al., Hashimoto and Meyer et al. wherein an angle formed by an absorption axis of the polarizing layer and a slow axis of the optically compensating A-layer (the anisotropic layer made of a polymer film) is not smaller than  $85^{\circ}$  and

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not larger than  $95^\circ$  as taught by Nishikawa et al., since Nishikawa et al. teach that such orientation of the compensating layers with respect to the polarizing layer results in an optical compensatory film having high productivity (Column 4, lines 1-21).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arakawa et al. (US 6400433), Hashimoto (US 6657690) and Meyer et al. (US 6773766; which is a continuation of 09/857216 filed on Jun. 22, 2001) in view of Suzuki et al. (US 6580483).

Arakawa et al., Hashimoto and Meyer et al. disclose all of the limitations set forth in the previous claims, but fail to specifically disclose that a selectively reflection wavelength range of the cholesteric liquid crystal layer is in a range not larger than 350nm.

However, Suzuki et al. teach in Column 1 lines 66-67 and Column 2 lines 1-4 the use of a cholesteric liquid crystal film wherein a selectively reflection wavelength range of the film is between 30nm to 150nm, which is not larger than 350nm.

Therefore, it would have been obvious at the time the invention was made to construct a polarizing plate as taught by Arakawa et al., Hashimoto and Meyer et al. wherein the cholesteric liquid crystal film has the property as taught by Suzuki et al., since Suzuki et al. teach that having the specific selectively reflection wavelength range helps to improve visibility of a display device (Column 1, lines 61-61).

### ***Response to Arguments***

Applicant's arguments filed Oct. 26, 2006 have been fully considered but they are not persuasive.

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In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Applicant argues that Arakawa and Hashimoto disclose a chiral discotic liquid crystal layer in which one of ordinary skill in the art would not be motivated to combine with the properties of a cholesteric liquid crystal layer as taught by Meyer. However, Arakawa discloses in Column 12 lines 21-23 and Hashimoto discloses in Column 42 lines 47-48 that the optically anisotropic layer can be formed of either a rod-like liquid crystal molecule or a discotic liquid crystal molecule, therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the optically anisotropic layer as taught by Arakawa to use a transparent support layer having the properties as taught by Hashimoto and to have the specific properties as taught by Meyer as discussed above, since Hashimoto teaches that lateral fluctuation can be minimized thus helps to optically compensate the display image more evenly (Column 7, lines 27-45) and that Meyer teaches that excellent optical properties such as wide range of light reflection property can thus be obtained (Column 12, lines 36-42).

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to W. Patty Chen whose telephone number is (571)272-8444. The examiner can normally be reached on 8:00-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571)272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

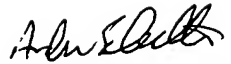
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W. Patty Chen  
Examiner  
Art Unit 2871

WPC  
1/31/07

  
ANDREW SCHECHTER  
PRIMARY EXAMINER